

IN THE CLAIMS:

Please amend claims 1, 2, 5, 7, 11 and 17-19 as shown below, in which changes are indicated by strikethrough and/or underscoring.

1. (Currently amended) A stator winding for use in a rotating electric machine having a slotless stator, said stator winding being a hollow cylindrical body formed by:

forming turns by winding a wire sheaf of a plurality of fine wires composed of conductors bundled together, through one turn in an approximately rhombic shape;

forming approximately rhombic shaped coil segments comprising a continuous length of said wire sheaf by winding and arranging a plurality of said turns so as to be sequentially shifted continuously in a direction of one diagonal of said rhombic shape;

forming a band shaped body using a plurality of said coil segments with these coil segments sequentially shifted in the direction of said one diagonal and so as to be adjacent to each other; and

rolling said band shaped body into a hollow cylindrical shape;

wherein with each of said respective turns, opposite end portions which are located in a direction of another diagonal of said rhombic shape orthogonal to the direction of said one diagonal, have bent back portions which are disposed outside of said rhombic shape;

said bent back portions become end portions of said hollow cylindrical body; and

said bent back portions are bent to an inner peripheral side of said hollow cylindrical body.

2. (Currently amended) A stator winding according to claim 1, wherein with said wire sheaf, one end portion of said opposite end portions of said respective turns which are located in said direction of another diagonal of said rhombic shape orthogonal to the direction of said one diagonal is wound from ~~an~~ the inner peripheral side of said hollow cylindrical body to an outer peripheral side thereof, and another end portion of said opposite end portions of said respective turns, is wound from the outer

peripheral side of said hollow cylindrical body to the inner peripheral side thereof.

3. (Previously presented) A stator winding according to claim 1, wherein said bent back portions proceed so as to project outside of said turn, then return back in an approximately U-shape and proceed so as to return inside of said turn.

4. (Previously presented) A stator winding according to claim 1, wherein said respective turns are arranged touching adjacent ones of said turns.

5. (Currently amended) A stator winding according to claim 2, wherein of the four sides of said approximately rhombic shaped coil segments, two said sides located on one side of said other diagonal of said rhombic shape are arranged on ~~an~~ the inner peripheral side of said hollow cylindrical body, and the other two said sides opposite to the two said sides located on said one side are arranged on an outer peripheral side of said hollow cylindrical body.

6. (Previously presented) A stator winding according to claim 5, wherein the two sides of the coil segment which are arranged on the inner peripheral side of said hollow cylindrical body are abutted in the circumferential direction against said two sides which are arranged on the inner peripheral side of the coil segment adjacent thereto.

7. (Currently amended) A stator winding according to claim 3, wherein said bent back portions are bent from the ~~inner peripheral side of said hollow cylindrical body towards the outer peripheral side thereof, or from the outer peripheral side of said hollow cylindrical body towards the inner peripheral side thereof.~~

8. (Previously presented) A stator winding for use in a rotating electric machine having a slotless stator, said stator winding being a hollow cylindrical body formed by:

forming turns by winding a wire sheaf of a plurality of fine wires composed of conductors bundled together, through one turn in an approximately rhombic shape;

forming approximately rhombic shaped coil segments comprising a continuous length of said wire sheaf by winding and arranging a plurality of said turns so as to be sequentially shifted continuously in a direction of one diagonal of said rhombic shape;

forming a band shaped body using a plurality of said coil segments with these coil segments sequentially shifted in the direction of said one diagonal and so as to be adjacent to each other; and

rolling said band shaped body into a hollow cylindrical shape;

wherein said wire sheaf is twisted at least one turn in a helical form within a range of one side of the respective approximate rhombic shaped turns.

9. (Previously presented) A stator winding according to claim 1, wherein said wire sheaf has an approximately rectangular shaped cross-section

10. (Previously presented) A stator winding according to claim 1, wherein said fine wires have a distorted circular cross-section with linear portions, and adjacent fine wires are contacted together at said linear portions.

11. (Currently amended) A method of manufacturing a stator winding for use in a rotating electric machine having a slotless stator, said method comprising:

a turn forming step for forming turns by winding a wire sheaf of a plurality of fine wires composed of conductors bundled together, through one turn in an approximately rhombic shape;

a coil segment forming step for forming approximately rhombic shaped coil segments comprising a continuous length of said wire sheaf by winding and arranging a plurality of said turns so as to be sequentially shifted continuously in a direction of one diagonal of said rhombic shape; and

a hollow cylindrical body forming step for forming a band shaped body using a plurality of said coil segments by overlapping these coil segments so as to be sequentially shifted in the direction of said one diagonal and adjacent to each other, and rolling said band shaped body into a hollow cylindrical

shape,

said turn forming step includes a step where, with said wire sheaf, one end portion of opposite end portions of said respective turns which are located in a direction of another diagonal orthogonal to the direction of said one diagonal is wound from an inner peripheral side of said hollow cylindrical body to an outer peripheral side thereof, and another end portion of said opposite end portions of said respective turns, is wound from the outer peripheral side of said hollow cylindrical body to the inner peripheral side thereof, and also includes a bent back portion forming step for forming bent back portions wherein said opposite end portions of said respective turns are formed with bent back portions disposed outside of said rhombic shape;

said bent back portions become end portions of said hollow cylindrical body; and

said bent back portions are bent to the inner peripheral side of said hollow cylindrical body.

12. (Previously presented) A method of manufacturing a stator winding according to claim 11, wherein each said bent back portion proceeds so as to project outside of said turn, and then returns back in an approximately U-shape and proceeds so as to return inside of said turn.

13. (Previously presented) A method of manufacturing a stator winding according to claim 11, wherein said turn forming step incorporates a press step for pressing said wire sheaf so that adjacent fine wires are closely contacted together.

14. (Previously presented) A method of manufacturing a stator winding according to claim 13, further including, prior to said press step, a step of twisting said wire sheaf at least one turn in a helical form within a range of one side of said approximately rhombic shaped turn.

15. (Previously presented) A method of manufacturing a stator winding according to claim 13, wherein said press step incorporates a step for forming said wire sheaf so that said wire sheaf has an approximately rectangular cross-section.

16. (Previously presented) A stator winding according to claim 2, wherein said bent back portions proceed so as to project outside of said turn, and then return back in an approximately U-shape and proceed so as to return inside of said turn.

17. (Currently amended) A stator winding according to claim 3, wherein of the four sides of said approximately rhombic shaped coil segments, two said sides located on one side of said other diagonal of said rhombic shape are arranged on ~~an~~ the inner peripheral side of said hollow cylindrical body, and the other two said sides opposite to the two said sides located on said one side are arranged on an outer peripheral side of said hollow cylindrical body.

18. (Currently amended) A stator winding for use in a rotating electric machine having a slotless stator, comprising a band shaped body of a plurality of coil segments rolled into a hollow cylindrical shape, wherein:

each of said coil segments is approximately rhombic shaped and includes a continuous length of a wire sheaf wound and arranged into a plurality of turns which are sequentially shifted continuously in a direction of one diagonal of said rhombic shape;

each of said turns is also approximately rhombic shaped;

said wire sheaf includes a plurality of fine wires composed of conductors bundled together;

said plurality of said coil segments of said band shaped body are sequentially shifted in the direction of said one diagonal and so as to be adjacent to each other; and

with each of said respective turns, opposite end portions which are located in a direction of another diagonal of said rhombic shape orthogonal to the direction of said one diagonal, have bent back portions which are disposed outside of said rhombic shape;

said bent back portions become end portions of said hollow cylindrical body; and

said bent back portions are bent to an inner peripheral side of said hollow cylindrical body.

19. (Currently amended) A stator winding according to claim 18, wherein with said wire sheaf, one end portion of said opposite end portions of respective ones of said turns which are located in said direction of another diagonal of said rhombic shape orthogonal to the direction of said one diagonal is wound from ~~an~~ the inner peripheral side of said hollow cylindrical body to an outer peripheral side thereof, and another end portion of said opposite end portions of said respective turns, is wound from the outer peripheral side of said hollow cylindrical body to the inner peripheral side thereof.

20. (Previously presented) A stator winding according to claim 18, wherein said bent back portions proceed so as to project outside of said turn, and then return back in an approximately U-shape and proceed so as to return inside of said turn.

21. and 22. Cancelled

23. (Previously presented) A stator winding according to claim 1, wherein outer peripheral sides of the sequentially adjacent coil segments radially overlap inner peripheral sides of the adjacent coil segments in the hollow cylindrical shape .

24. (Previously presented) A stator winding according to claim 18, wherein outer peripheral sides of the sequentially adjacent coil segments radially overlap inner peripheral sides of the adjacent coil segments in the hollow cylindrical shape .

25. (Previously presented) A stator winding according to claim 1, wherein each said coil segment is sequentially shifted such that portions of multiple turns of said coil overlap with portions of multiple turns an adjacent one of said coil segments.

26. (Previously presented) A stator winding according to claim 1, wherein each said turn is wound in the same manner.